

ABSTRACT

To provide a highly versatile device which can perform gray-scale display by applying two-level signals to data lines. When performing 8-level gray-scale display, a single frame (1f) is divided into a first period T1 for applying two-level signals to a liquid crystal layer in accordance with gray-scale data and a second period T2 for applying an H-level voltage to the liquid crystal layer in accordance with a threshold voltage of liquid crystal. The first period T1 is further divided into 7 sub-fields (Sf1 to Sf7) in accordance with gray-scale characteristics of an electro-optical device. Either an H or L level is written in accordance with a gray level of each pixel every sub-field. Thus, the ratio of an on period or an off period of the pixel to the single frame is controlled.

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